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Supplement 1

EEG recording

EEG data were collected using an ANT device (ANT Neuro, The Netherlands) and a 64 channels WaveGuard EEG cap. Mastoids were used as a recording reference. Impedance was kept below 20 kΩ and the sampling rate was set at 512 Hz. The off-line processing of EEG data was performed in EEGLAB for MatLab© (Delorme and Makeig, 2004) aiming at a conventional data preparation. The power-line noise was removed using multi-tapering and Thomas *F*-statistics implemented in the CleanLine plugin for EEGLAB. Epochs containing muscle artifacts were manually rejected. An eye-movements correction was performed using Independent Component analysis (ICA). Channels containing excessive artifacts were interpolated.

Amsterdam Resting-State Questionnaire (ARSQ)

To quantify thoughts and feelings during the resting-state session, participants completed a Lithuanian translation of the Amsterdam Resting-State Questionnaire on paper with detailed instructions as described in (Diaz et al. 2014). All statements were scored on a five-point Likert-type scale (1–5) with the labels "Completely Disagree," "Disagree," "Neither Agree nor Disagree," "Agree," and "Completely Agree." We used a 10-factor model of mind-wandering experiences during resting-state, allowing for the quantitative assessment of ten dimensions of mind wandering (Discontinuity of Mind, Theory of Mind, Self, Planning, Sleepiness, Comfort, Somatic Awareness, Health Concern, Visual Thought, Verbal Thought, see items below), by averaging the ratings of the ARSQ statements within each factor. Means and SDs of ARSQ scores for each of the 10 dimensions are presented in Supplement 2. The ability to evaluate statements of the ARSQ was used as an exclusion criterion in prior studies using the ARSQ; data sets were filtered based on (1) reported interruption, (2) low motivation (rating "Disagree" or lower), (3) low-rated ability to remember thoughts/feelings (rating "Disagree" or lower), (4) reported rating inability (rating below "Agree"), (5) not having eyes closed (rating below "Agree"), and (6) exhibiting extreme responses on the majority of items (Diaz et al. 2014). As we performed experiments in controlled settings, we used moderate exclusion criteria. All of our subjects confirmed staying with closed eyes throughout the session and were motivated to participate in the study; however, 34 subjects responded to one of the following questions below "Agree": I was able to rate the statements; I have difficulty remembering my thoughts; I have difficulty remembering my feelings. We did not exclude those subjects, because we considered it an interesting possibility that the ability to rate or remember would be related to microstates. Additionally, inter-class correlations of ARSQ dimensions were calculated by Pearson correlations. R and p values (uncorrected) are presented in Supplement 3.

ARSQ dimension and Corresponding items (Diaz et al. 2014)

Discontinuity of Mind: "I had busy thoughts", "I had rapidly switching thoughts", "I had difficulty holding on to my thoughts".

Theory of Mind: “I thought about others”, “I thought about people I like”, “I placed myself in other peoples’ shoes”.

Self: “I thought about my feelings”, “I thought about my behavior”, “I thought about myself”.

Planning: “I thought about things I need to do”, “I thought about solving problems”, “I thought about the future”.

Sleepiness: “I felt tired”, “I felt sleepy”, “I had difficulty staying awake”.

Comfort: “I felt comfortable”, “I felt relaxed”, “I felt happy”.

Somatic Awareness: “I was conscious of my body”, “I thought about my heartbeat”, “I thought about my breathing”.

Health Concern: “I felt ill”, “I thought about my health”, “I felt pain”.

Visual Thoughts: “I thought in images”, “I pictured events”, “I pictured places”.

Verbal Thoughts: “I thought in words”, “I had silent conversations”, “I imagined talking to myself”.

Microstates

For the microstate extraction, the EEG data were re-calculated to average reference and filtered at 2–20 Hz with the BrainAnalyzer software. Further analysis was performed using a custom-written plug-in for the BrainAnalyzer. The data were cut into 2 sec length epochs. Then, all momentary potential maps at peak times of global field power (GFP) were normalized for GFP and clustered into four map topographies using k-means clustering (Pascual-Marqui et al. 1995).

The four map topographies of each participant were labelled according to the best fit microstate topography of classes A, B, C, D in a normative study (Koenig et al. 2002). The four labelled individual microstate maps of each participant were used to label the sequential momentary maps at peak times of GFP, resulting in time sequences of the four microstate classes.

An average map was computed for each microstate class for each participant, and the grand mean map for each of the four microstate classes was computed across participants. The three microstate parameters - mean duration (Dur), frequency of occurrence per second (Occ), and percentage of occupied total analysis time (‘contribution’, Con) - were computed for each of the four microstate classes of each participant. Means and SDs of the measures for each microstate Class are presented in Supplement 4. Additionally, inter-class correlations of the measures of A, B, C and D microstates were calculated by Pearson correlation. R and p values (uncorrected) are presented in Supplement 5.

Supplement 2. Mean scores and standard deviations of the evaluated ARSQ domains.

	ARSQ domains									
	DoM	**ToM**	**Self**	**Planning**	**Sleepiness**	**Comfort**	**SA**	**Health**	**Visual**	**Verbal**
Mean	3.39	3.02	3.40	3.25	2.70	3.66	2.72	1.70	3.77	3.08
SD	0.82	0.77	0.90	0.95	0.83	0.79	0.80	0.57	0.96	0.94

Supplement 3. Intra-class correlation coefficients and corresponding p values of ARSQ dimensions

PCC / P	DoM	ToM	Self	Planning	Sleepiness	Comfort	SA	health	visual	verbal
DoM		0.51	0.35	0.33	0.19	-0.14	0.00	0.07	0.38	0.22
ToM	.00		0.29	0.46	0.21	0.19	-0.25	0.18	0.45	0.22
Self	.00	.00		0.49	-0.16	0.16	0.03	0.20	0.34	0.24
Planning	.00	.00	.00		-0.07	0.23	-0.11	0.18	0.38	0.21
Sleepiness	.07	.04	.12	.52		-0.10	-0.05	0.00	0.03	0.16
Comfort	.17	.06	.13	.03	.32		-0.10	-0.04	0.29	0.18
SA	.99	.02	.74	.29	.61	.31		-0.01	-0.26	0.09
Health	.52	.08	.05	.08	.98	.73	.94		0.18	0.00
Visual	.00	.00	.00	.00	.75	.01	.01	.09		-0.02
Verbal	.04	.03	.02	.05	.12	.08	.40	.97	.83	

Bold and underlined - Correlation is significant at the 0.01 level (2-tailed).

Bold - Correlation is significant at the 0.05 level (2-tailed).

Shaded cells denote significant correlations after Bonferroni-Holm correction

Supplement 4. Means and standard deviations of microstate Classes A, B, C and D parameters.

	Microstates											
	A			B			C			D		
	Con	Occ	Dur	Con	Occ	Dur	Con	Occ	Dur	Con	Occ	Dur
Mean	0.23	3.57	64.91	0.22	3.43	64.45	0.26	3.75	70.08	0.29	3.97	75.06
SD	0.06	0.92	10.46	0.05	0.81	12.79	0.07	0.74	15.59	0.07	0.70	19.67

Supplement 5. Intra-class correlation coefficients and corresponding p values of parameters of resting-state microstates. GFP- Global Field Power, Con-contribution, Occ – occurrence, Dur - duration

PCC / **P**			Microstates											
			A			B			C			D		
			Con	Occ	Dur	Con	Occ	Dur	Con	Occ	Dur	Con	Occ	Dur
Microstates	A	Con		**0.78**	**0.34**	-0.14	0.18	**-0.42**	**-0.34**	-0.01	**-0.43**	**-0.39**	0.07	**-0.43**
		Occ	0		**-0.31**	0.03	**0.64**	**-0.71**	**-0.24**	**0.47**	**-0.68**	**-0.43**	**0.54**	**-0.75**
		Dur	0	0		**-0.24**	**-0.68**	**0.49**	-0.17	**-0.72**	**0.39**	0.06	**-0.71**	**0.51**
	B	Con	0.17	0.76	0.02		**0.66**	**0.46**	**-0.33**	-0.09	**-0.27**	**-0.26**	-0.04	-0.18
		Occ	0.08	0	0	0		**-0.35**	**-0.27**	**0.48**	**-0.69**	**-0.35**	**0.56**	**-0.68**
		Dur	0	0	0	0	0		-0.11	**-0.66**	**0.48**	0.13	**-0.69**	**0.61**
	C	Con	0	0.02	0.11	0	0.01	0.3		**0.56**	**0.72**	**-0.49**	**-0.31**	**-0.29**
		Occ	0.91	0	0	0.39	0	0	0		-0.16	**-0.49**	**0.47**	**-0.77**
		Dur	0	0	0	0.01	0	0	0	0.13		-0.18	**-0.75**	**0.31**

			Con	0	0	0.57		0.01	0	0.21		0	0	0.08		**0.28**	**0.78**
		D	Occ	0.51	0	0		0.67	0	0		0	0	0	0.01		**-0.36**
			Dur	0	0	0		0.08	0	0		0	0	0	0	0	

Bold and underlined – correlation is significant at the 0.01 level (2-tailed)

Bold - correlation is significant at the 0.05 level (2-tailed)

Shaded cells denote significant correlations after Bonferroni-Holm correction